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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FORMAN, BETTY J	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/451,666	ITO ET AL.	
	Examiner	Art Unit	
	BJ Forman	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 December 2002 .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 7 and 23-48 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 7 and 23-48 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 40 .
4) ☒ Interview Summary (PTO-413) Paper No(s). 33 34 35 .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

FINAL ACTION

1. This action is in response to papers filed 30 December 2002 in Paper No. 39 in which claims 7, 23-26 and 41 were amended, claims 9-15 were canceled and claims 42-45, 47-48 were added. Claims 47-48 have been renumbered as Claims 46-47 according to 35 C.F.R. 1.126. All of the amendments have been thoroughly reviewed and entered. The previous rejections in the Office Action of Paper No. 31 dated 9 August 2002 are withdrawn in view of the amendments. All of the arguments regarding the previous rejections have been thoroughly reviewed but are deemed moot in view of the amendments, withdrawn rejections and new grounds for rejection. New grounds for rejection are discussed.

Claims 6, 7 and 23-47 are under prosecution.

Specification

2. The amendment filed 30 December 200 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Claim 7 has been amended to recite "the binding agent comprises a poly-l-lysine and a carbodiimide." The specification as originally filed describe the binding agent is poly-l-lysine or carbodiimide (e.g. page 8, lines 8-9) but the specification does not teach or describe a binding agent comprising a poly-l-lysine and a carbodiimide as newly recited. As such, the amendment to Claim 7 introduces new matter in to the disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

35 U.S.C. 112: first paragraph

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 7 has been amended to recite "the binding agent comprises a poly-l-lysine and a carbodiimide." The specification as originally filed describe the binding agent is poly-l-lysine or carbodiimide (e.g. page 8, lines 8-9) but the specification does not teach or describe a binding agent comprising a poly-l-lysine and a carbodiimide as newly claimed. Therefore, the specification fails to define or provide any disclosure to support the newly claimed recitation.

MPEP 2163.06 notes "IF NEW MATTER IS ADDED TO THE CLAIMS, THE EXAMINER SHOULD REJECT THE CLAIMS UNDER 35 U.S.C. 112, FIRST PARAGRAPH - WRITTEN DESCRIPTION REQUIREMENT. *IN RE RASMUSSEN*, 650 F.2D 1212, 211 USPQ 323 (CCPA 1981)." MPEP 2163.02 teaches that "Whenever the issue arises, the fundamental factual inquiry is whether a claim defines an invention that is clearly conveyed to those skilled in the art at the time the application was filed...If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application." MPEP 2163.06 further notes "WHEN AN AMENDMENT IS FILED IN REPLY TO AN OBJECTION OR REJECTION BASED ON 35 U.S.C. 112, FIRST PARAGRAPH, A STUDY OF THE ENTIRE APPLICATION IS OFTEN NECESSARY TO DETERMINE WHETHER OR NOT "NEW MATTER" IS INVOLVED. *APPLICANT SHOULD THEREFORE SPECIFICALLY POINT OUT THE SUPPORT FOR ANY AMENDMENTS MADE TO THE DISCLOSURE*" (emphasis added).

35 U.S.C. 112: second paragraph

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6, 7 and 23-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 7 and 23-48 are indefinite in independent Claims 24, 25, 26 and 41 because the independent claims are drawn to methods for producing a biochip. However, the claims do not result in biochip production. Therefore, it is unclear whether the method steps accomplish biochip production as claimed. It is suggested that Claims 24, 25, 26 and 41 each be amended to clarify e.g. at the end of each claim insert "thereby producing a biochip".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 6, 7and 23-29, 34-35, 38-39, 41-45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter et al (U.S. Patent No. 6,207,369, B1, filed 17 September 1996) in view of Takenishi et al (U.S. Patent No. 6,017,742, filed 20 January 1998).

Regarding Claim 6, Wohlstadter et al teach the methods wherein the plate comprises a material selected from the group consisting of nylon membrane, glass silicone wafer and plastic (Column 15, lines 39-46).

Regarding Claim 7, the claim is drawn to the method of Claim 24, 25, 26 or 41 wherein the binding agent comprises a poly-l-lysine and a carbodiimide. However, as addressed above, the recitation "comprises a poly-l-lysine and a carbodiimide" constitutes new matter and therefore is not addressed. The specification teaches the binding agent comprises poly-l-lysine or carbodiimide. For purposes of examination, the limitations of Claim 7 are interpreted to encompass the teaching of the specification wherein the binding agent comprises poly-l-lysine or carbodiimide. Takenishi et al teach the method similar to those of Wohlstadter et al wherein the binding agent is carbodiimide (Abstract) and the teach a motivation to substitute carbodiimide for other binding agents i.e. carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44). One of ordinary skill in the art would have been motivated to apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al for the obvious benefits of ease of use and improved experimental results (Takenishi et al, Column 2, lines 26-44).

Regarding Claim 23, Wohlstadter et al teach the method of Claim 26 wherein the plate is substantially planar e.g. glass (Column 15, lines 6-45 and Fig. 5).

Regarding Claim 24, Wohlstadter et al teach a method for producing a biochip comprising providing a binding agent and a plurality of probes, first spotting the binding agent

to a plurality of position on the biochip surface wherein the binding agent is locally spotted with a pin or tube (Column 20, lines 34-42) and after spotting of the binding agent, locally spotting a plurality of probes onto the binding agents locally spotted in the first step wherein the plurality of probes are spotted with a pin or tube and the probe is immobilized to the surface by binding to the binding agent (Column 20, line 25-Column 22, line 3; especially, Column 21, lines 38-67) utilizing known binding agent-probe chemistry to immobilize the probe to the binding agent/surface (Column 21, lines 38-58) but they do not specifically teach the binding agent comprise carbodiimide. However, carbodiimide-probe immobilization chemistry was well known in the art at the time the claimed invention was made as taught by Takenishi et al (Abstract).

Takenishi et al teach a similar method for producing a biochip comprising providing a carbodiimide binding agent and a plurality of probes, first spotting the binding agent to a plurality of position on the biochip surface wherein the binding agent is locally spotted and after spotting of the binding agent, locally spotting a plurality of probes onto the binding agents locally spotted in the first step wherein the probe is immobilized to the surface by binding to the binding agent (Example 1, Column 8, lines 16-44) and they teach that carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the general binding agent teachings of Wohlstadter et al and the carbodiimide binding agent teachings Takenishi et al. One of ordinary skill in the art would have been motivated to apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al i.e. carbodiimide immobilizes an active substance easily, is

easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

Regarding Claim 25, Wohlstadter et al teach a method for producing a biochip comprising providing a mixture of binding agent and a plurality of probes (Column 21, lines 57-58) providing a biochip surface and locally spotting the mixture to a plurality of positions on the surface where a probe is desired to be immobilized and the probe is immobilized to the surface by binding to the binding agent (Column 20, line 25-Column 22, line 3; especially, Column 21, lines 38-67) utilizing known binding agent-probe chemistry to immobilize the probe to the binding agent/surface (Column 21, lines 38-58) but they do not specifically teach the binding agent comprise carbodiimide. However, carbodiimide-probe immobilization chemistry was well known in the art at the time the claimed invention was made as taught by Takenishi et al (Abstract).

Takenishi et al teach a similar method for producing a biochip comprising providing a carbodiimide binding agent and a plurality of probes, first spotting the binding agent to a plurality of position on the biochip surface wherein the binding agent is locally spotted and after spotting of the binding agent, locally spotting a plurality of probes onto the binding agents locally spotted in the first step wherein the probe is immobilized to the surface by binding to the binding agent (Example 1, Column 8, lines 16-44) and they teach that carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the general binding agent teachings of Wohlstadter et al and the carbodiimide binding agent teachings Takenishi et al. One of ordinary skill in the art

would have been motivated to apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al i.e. carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

Regarding Claim 26, Wohlstadter et al teach a method for producing a biochip comprising providing a mixture of binding agent and a plurality of probes (Column 21, lines 57-58) locally spotting the mixture to a plurality of positions on the surface where a probe is desired to be immobilized and the probe is immobilized to the surface by binding to the binding agent (Column 20, line 25-Column 22, line 3; especially, Column 21, lines 38-67) utilizing known binding agent-probe chemistry to immobilize the probe to the binding agent/surface (Column 21, lines 38-58) but they do not specifically teach the binding agent comprise carbodiimide. However, carbodiimide-probe immobilization chemistry was well known in the art at the time the claimed invention was made as taught by Takenishi et al (Abstract).

Takenishi et al teach a similar method for producing a biochip comprising providing a carbodiimide binding agent and a plurality of probes, first spotting the binding agent to a plurality of position on the biochip surface wherein the binding agent is locally spotted and after spotting of the binding agent, locally spotting a plurality of probes onto the binding agents locally spotted in the first step wherein the probe is immobilized to the surface by binding to the binding agent (Example 1, Column 8, lines 16-44) and they teach that carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the general binding agent teachings of Wohlstadter et al and the carbodiimide binding agent teachings Takenishi et al. One of ordinary skill in the art would have been motivated to apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al i.e. carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

Regarding Claim 27, Wohlstadter et al teach the methods wherein the mixture is spotted with a pin e.g. solid capillary and micro-contact stamping (Column 19, lines 59-66 and Column 21, lines 38-39).

Regarding Claim 28, Wohlstadter et al teach the method wherein the mixture is spotted with a tube e.g. hollow capillary (Column 19, lines 59-60).

Regarding Claim 29, Wohlstadter et al teach the method wherein the tube is a capillary (Column 19, lines 59-60).

Regarding Claim 34, Wohlstadter et al teach the method wherein the mixture is suctioned by a pin or a tube and spotted on a plurality of position on the biochip i.e. porous surface of the capillary suctions the mixture for spotting (Column 19, line 63-Column 20, line 8).

Regarding Claim 35, Wohlstadter et al teach the method wherein the mixture is carried by the tip of a pin or a tube and spotted on a plurality of positions on the biochip or plate (Column 19, line 63-Column 20, line 8).

Regarding Claim 38, Wohlstadter et al teach the method wherein the probe and binding agent are suctioned by a pin or a tube and spotted on a plurality of position on the biochip i.e.

porous surface of the capillary suctions the mixture for spotting (Column 19, line 63-Column 20, line 8).

Regarding Claim 39, Wohlstadter et al teach the method wherein the probe and binding agent are carried by the tip of a pin or a tube and spotted on a plurality of positions on the biochip or plate (Column 19, line 63-Column 20, line 8).

Regarding Claim 41, Wohlstadter et al teach a method for producing a biochip comprising providing a binding agent and a plurality of probes, first spotting the binding agent to a plurality of positions on the biochip wherein the binding agent is locally spotted with a pin or tube and the binding agent is only immobilized on a spotted area of the biochip and after spotting the binding agent, locally spotting a plurality of probes onto the positions spotting with the binding agent wherein the probes are locally spotted with the pin or tube wherein the tube comprises a tip comprising a recess i.e. the capillary is hollow providing a recessed tip (Column 19, lines 59-61)and wherein the probe is immobilized to the surface by binding to the binding agent (Column 20, line 25-Column 22, line 3; especially, Column 21, lines 38-67) utilizing known binding agent-probe chemistry to immobilize the probe to the binding agent/surface (Column 21, lines 38-58) but they do not specifically teach the binding agent comprise carbodiimide. However, carbodiimide-probe immobilization chemistry was well known in the art at the time the claimed invention was made as taught by Takenishi et al (Abstract).

Takenishi et al teach a similar method for producing a biochip comprising providing a carbodiimide binding agent and a plurality of probes, first spotting the binding agent to a plurality of position on the biochip surface wherein the binding agent is locally spotted and after spotting of the binding agent, locally spotting a plurality of probes onto the binding agents locally spotted in the first step wherein the probe is immobilized to the surface by binding to the binding agent (Example 1, Column 8, lines 16-44) and they teach that carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other

immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the general binding agent teachings of Wohlstadter et al and the carbodiimide binding agent teachings Takenishi et al. One of ordinary skill in the art would have been motivated to apply the apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al i.e. carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low molecular weight active substances is weak (Column 2, lines 26-44).

Regarding Claim 42, Wohlstadter et al teach the methods wherein the plate comprises a material selected from the group consisting of nylon membrane, glass silicone wafer and plastic (Column 15, lines 39-46).

Regarding Claim 43, Wohlstadter et al teach the methods wherein the probe comprises DNA (Column 24, lines 15-51).

Regarding Claim 44, Wohlstadter et al teach the methods wherein the probe comprises RNA (Column 24, lines 15-51).

Regarding Claim 45, Wohlstadter et al teach the methods wherein the probe comprises protein (Column 24, lines 15-51).

Regarding Claim 47, Takenishi et al teach the similar method wherein the binding agent comprises a carbodiimide (Abstract) and the teach a motivation to substitute carbodiimide for other binding agents i.e. carbodiimide immobilizes an active substance easily, is easy to handle and overcomes problems of other immobilizers e.g. variance in amount of active substance immobilized, active substance is desporbed easily, and interaction of low

molecular weight active substances is weak (Column 2, lines 26-44). One of ordinary skill in the art would have been motivated to apply the carbodiimide binding agent of Takenishi et al to the method of Wohlstadter et al based on the advantages of carbodiimide over other known binding agents as taught by Takenishi et al for the obvious benefits of ease of use and improved experimental results (Takenishi et al, Column 2, lines 26-44).

9. Claims 30-33, 36, 37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter et al (U.S. Patent No. 6,207,369, B1, filed 17 September 1996) in view of Takenishi et al (U.S. Patent No. 6,017,742, filed 20 January 1998) as applied to Claims 24, 25 and 26 above and further in view of Martinsky (U.S. Patent No. 6,101,946, filed 13 November 1998).

Regarding Claims 30-33 and 37, Wohlstadter et al teach the method for producing a biochip wherein the binding agent and probe is spotted with a pin or tube (Column 19, line 58-Column 20, line 42 and Column 21, lines 38-58) but they do not teach probe and binding agent are spotted with a pin comprising at least one recess (Claim 30); wherein the recess comprises a concave shape (Claims 31); wherein the recess comprises a groove (Claim 32) or wherein the recess comprises a radially-shaped groove (Claim 33). However, Martinsky teaches a similar method comprising spotting a mixture locally onto a biochip surface with a pin wherein the recess comprises a concave recess having a radially-shaped groove wherein the pins are precisely constructed for accurate sample-volume spotting (Column 6, lines 21-57 and Fig. 4). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the pin formation of Wohlstadter et al with the radially-shaped

groove of Martinsky based on desired volume, size and shape of biochip spots for the obvious benefits of optimizing spots characteristics to thereby accurately spot sample volumes as taught by Martinsky (Column 6, lines 45-57).

Regarding Claim 36 and 40, Wohlstadter et al teach the method for producing a biochip wherein the binding agent and probe is spotted with a pin or tube (Column 19, line 58-Column 20, line 42) but they do not specifically teach the solution is carried by surface tension. However, Martinsky teaches the similar spotting method wherein the solution is carried by surface tension (Column 8, lines 13-36) wherein the spotting is accomplished by simple contact with the surface of the biochip Column 8, lines 31-33). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the simple spotting of Martinsky to the stamping technique of Wohlstadter et al and to carry the binding agent on the pin or tube by surface tension whereby spotting is accomplished by contacting the biochip surface as taught by Martinsky (Column 8, lines 31-33) for the obvious benefits of spotting simplicity.

10. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter et al (U.S. Patent No. 6,207,369, B1, filed 17 September 1996) in view of Takenishi et al (U.S. Patent No. 6,017,742, filed 20 January 1998) as applied to Claims 24, 25 and 26 above and further in view of Shalon et al (U.S. Patent No. 6,110,426, filed 30 December 1997).

Regarding Claim 46, Wohlstadter et al teach the method wherein the binding agent is spotted onto the biochip surface and wherein the binding agent is selected based on the desired probe binding properties (Column 21, lines 1-37) but they do not specifically teach the binding agent comprises poly-l-lysine. However, poly-l-lysine was well known in the art and

routinely practiced for applying to biochip surfaces and probe immobilization as taught by Shalon et al (Column 4, lines 40-46). Shalon et al teach a method of producing a biochip comprising spotting a probe onto the surface of the biochip comprising a binding agent wherein the spotting utilizes a pin and wherein the probe is immobilized onto the biochip by binding to the binding agent and wherein the binding agent is poly-l-lysine (Column 13, line 45-Column 14, line 8) wherein the probe is non-covalently bound via electrostatic interaction (Column 4, lines 40-46).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the general binding agent teachings of Wohlstadter et al and the poly-l-lysine binding agent teachings Shalon et al. One of ordinary skill in the art would have been motivated to apply the poly-l-lysine binding agent of Shalon et al to the method of Wohlstadter et al to thereby electrostatically immobilized the probe to the biochip via non-covalent binding for the obvious benefits of simplified (i.e. non-chemical) immobilization (Shalon et al, Column 4, lines 40-46).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

12. No claim is allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:30 TO 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

BJ Forman, Ph.D.
Patent Examiner
Art Unit: 1634
March 18, 2003